



US Army Corps  
of Engineers  
North Central Division

# GREAT LAKES LEVELS

Update Letter No. 79      February 3, 1992

## Regulatory Permit Program

### IGLD 1985 IMPLEMENTED

You may have noticed that the bulletin this month has undergone several changes. The most important one is the inclusion of a revised chart reference system, International Great Lakes Datum 1985 (IGLD 1985). Other changes include the replacement of Cleveland, Ohio, with Fairport, Ohio, as the Lake Erie master gage and the addition of metric values in the table of mean lake levels at the bottom right-hand corner of the bulletin, as well as along the right side of the lake hydrographs. This is in keeping with United States intentions to eventually convert all numerics from conventional units to the metric system.

Update Letter No. 76, November 4,

1991, featured an article describing the reasons behind the revision and the expected effects to the users. Although it may appear as though all the lakes have risen, it is merely the assigning of new elevations to the reference planes of each lake. Figure 1 is a sketch that depicts the change in elevation for the datum plane, and hence the water level. The actual water depth remains the same. These reference planes, called "chart datum" or "low water datum," require periodic re-levelling to correct for crustal movement within the Great Lakes basin. As part of the re-levelling requirement, the reference point zero, located on the St. Lawrence River near the Atlantic Ocean, was also moved a short distance from Pointe-au-Pere, Quebec, to

Rimouski, Quebec. A table to convert water levels for each respective lake from IGLD 1985 to IGLD 1955, as well as a sample calculation, is found on the back side of the bulletin. The IGLD 1985 has been tied to North American Vertical Datum 1988 (NAVD 1988), the new system used across the United States and Canada. Again, the NAVD 1988 is a similar adjustment reference to sea level. For a brochure explaining IGLD 1985 or questions about the new datum, contact the Detroit District at the address given on page 5. Canadian agencies which publish Great Lakes levels information also use IGLD 1985.

### CORPS REGULATORY PROGRAM

The U.S. Army Corps of Engineers' (Corps) primary civil works mission is to develop, manage, and protect our Nation's water and related land resources. The Corps' projects control flooding; maintain, improve, and create harbors and navigation channels; protect shorelines; generate hydroelectric power; and restore environmental values. The Corps administers a permit program which regulates various activities in the waters and wetlands of the Great Lakes region. The regulatory boundaries for the North Central Division are shown in Figure 2.

The Corps' regulatory program is one of the Nation's oldest. The original permit authority was established in the late 1800s. The program was initially intended to prevent the obstruction of navigable waters, in particular, the protection of commercial navigation.

Since the program was originally established, its breadth and complexity have increased substantially. National concern for the environment and water resources led

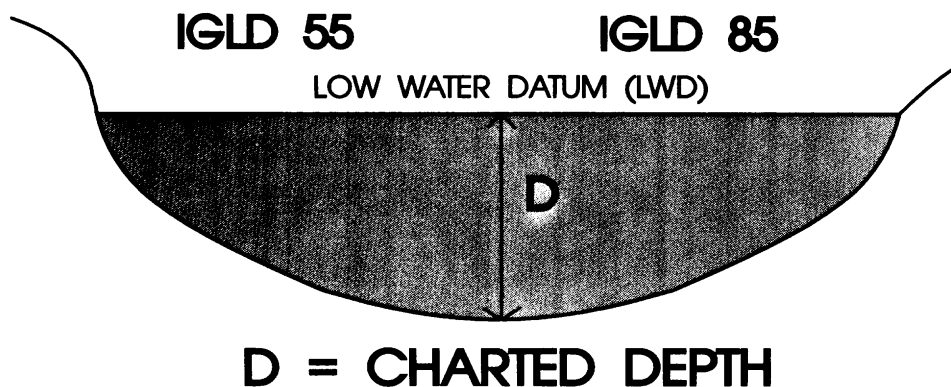


Figure 1. Schematic Sketch of Datum Plane Change.

to the adoption of the "Public Interest Review" and the requirement to consider a full range of factors. The focus expanded from protecting navigation alone, to include protecting the environmental quality of United States waters, as well as other factors. Today's regulatory program considers the public interest for both protection and use of water resources and the full range of environmental and socioeconomic factors.

### Authority for the Regulatory Program

Section 10 of the Rivers and Harbors Act of 1899 authorizes the Corps to regulate structures or work in, over, or under navigable waters of the United States. Permits are required for marinas, bulkheads, shore protection, piers, pipelines, dredging, and other construction or modification. Navigable waters are generally those which are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A list of navigable waters of the United States is available from the Corps' offices listed at the end of this article.

Section 404 of the Clean Water Act of 1972 gives the Corps authority to regulate discharges of dredged or fill material in waters of the United States. Clearing,

grading, leveling, and redistribution of material within wetlands are also regulated. Waters of the United States are very broadly defined and include the navigable waters of the United States and most other lakes, rivers, streams, impoundments, wetlands, sloughs, prairie potholes, wet meadows, ponds, etc., that have interstate or foreign commerce connection.

In Michigan, a portion of Section 404 authority has been transferred to the Michigan Department of Natural Resources (MDNR). Discharges in navigable waters are regulated by both MDNR and the Corps, while discharges in tributaries, inland waters, and isolated waters require only MDNR authorization. Michigan is the only state to assume such authority; the Corps maintains full Section 404 jurisdiction in the remainder of the Nation.

### Permits and the Permit Process

The Corps authorizes activities through individual and general permits. (See Figure 3 for a sample permit application). The Corps makes every effort to reduce delay in the permitting process to the regulated public without sacrificing review of important issues.

General permits are one way to limit

use of water or natural resources on routine categories of projects and to allow focus on more significant proposals. Proposals which are recognized as having minimal direct and cumulative effects are most often covered under general permit. Most general permit authorizations are executed shortly after receipt of complete information. The Corps has 36 Nationwide permits which account for a large percentage of authorizations in many districts. These permits were reissued on January 21, 1992, by Corps' headquarters for use in all 39 U.S. Corps districts. Interested readers are advised to contact the districts listed on page 4 for information regarding Nationwide authorizations.

Individual permits are generally required for large or potentially controversial projects, or for those which involve conflicting issues or environmentally sensitive areas. While the majority of individual permit decisions are made within 120 days, highly complex or controversial decisions can take considerably longer.

Public involvement is a major component of the individual permit process. Adjacent property owners; local and state governments; interested organizations, groups, and individuals; and other federal agencies are informed of the proposed permit

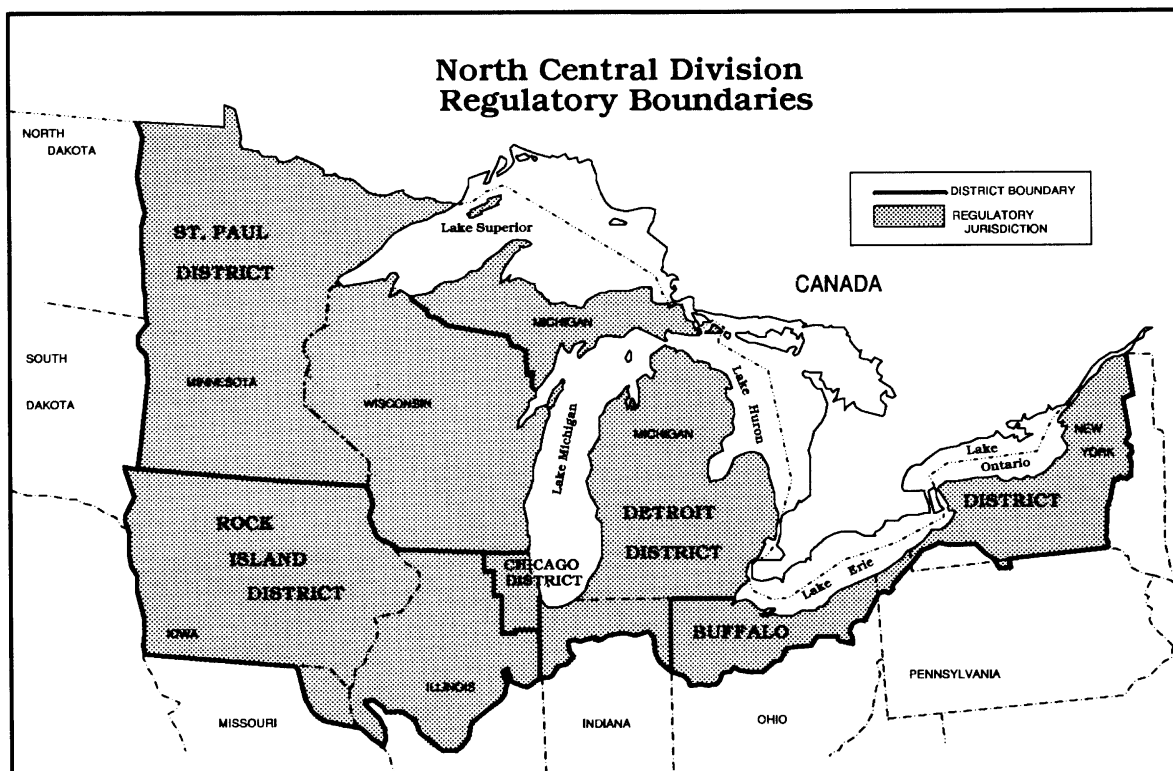


Figure 2. Regulatory Boundaries for the North Central Division.

# Great Lakes Basin Hydrology

The precipitation, water supplies, and outflows for the lakes are provided in Table 1. Precipitation data include the provisional values for the past month and the year-to-date and long-term averages. The provisional and long-term average water supplies and outflows are also shown.

**Table 1**  
**Great Lakes Hydrology<sup>1</sup>**

PRECIPITATION								
BASIN	JANUARY				YEAR-TO-DATE			
	1992*	AVG.**	DIFF.	% OF AVG.	1992*	AVG.**	DIFF.	% OF AVG.
Superior	1.4	2.0	-0.6	70	1.4	2.0	-0.6	70
Michigan-Huron	1.8	2.1	-0.3	86	1.8	2.1	-0.3	86
Erie	2.5	2.4	0.1	104	2.5	2.4	0.1	104
Ontario	2.4	2.7	-0.3	89	2.4	2.7	-0.3	89
Great Lakes	1.9	2.2	-0.3	86	1.9	2.2	-0.3	86

LAKE	JANUARY WATER SUPPLIES***		JANUARY OUTFLOW <sup>3</sup>	
	CFS <sup>2</sup>	AVG. <sup>4</sup>	CFS <sup>2</sup>	AVG. <sup>4</sup>
Superior	-5,000***	-14,000***	81,000	69,000
Michigan-Huron	74,000	53,000	176,000 <sup>5</sup>	158,000
Erie	28,000	25,000	195,000 <sup>5</sup>	192,000
Ontario	27,000	32,000	217,000	221,000

\*Estimated (inches)    \*\*1900-90 Average (inches)

\*\*\*Negative water supply denotes evaporation from lake exceeded runoff from local basin.

<sup>1</sup>Values (excluding averages) are based on preliminary computations.

<sup>2</sup>Cubic Feet Per Second    <sup>3</sup>Does not include diversions    <sup>4</sup>1900-89 Average (cfs)

<sup>5</sup>Reflects effects of ice/weed retardation in the connecting channels.

For Great Lakes basin technical assistance or information, please contact one of the following Corps of Engineers District Offices:

**For NY, PA, and OH:**  
Colonel John W. Morris  
Cdr, Buffalo District  
U.S. Army Corps  
of Engineers  
1776 Niagara Street  
Buffalo, NY 14207-3199  
(716) 879-4200

**For IL and IN:**  
LTC Randall R. Inouye  
Cdr, Chicago District  
U.S. Army Corps  
of Engineers  
River Center Bldg (6th Flr)  
111 North Canal Street  
Chicago, IL 60606-7206  
(312) 353-6400

**For MI, MN, and WI:**  
Colonel Richard Kanda  
Cdr, Detroit District  
U.S. Army Corps  
of Engineers  
P.O. Box 1027  
Detroit, MI 48231-1027  
(313) 226-6440 or 6441

by a public notice. Comments received in response to the notice are fully considered and appropriately weighed. The U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency (USEPA) are two federal agencies which have specific review and commenting authorities. Their comments, as well as those of state and local agencies, are generally given substantial weight.

A wide range of socioeconomic and environmental factors are considered in the public interest review. Among the issues weighed and balanced are economics, navigation, water quality, flood hazards, wetlands, shore erosion, historic and cultural values, fish and wildlife values, property ownership, as well as any other factors judged to be important to the needs and welfare of the public. The most common issues associated with controversial permits are environmental impacts, obstruction of navigation, and protection of adjacent property interests. Consideration of alternatives which minimize adverse impacts is a crucial step in the review process.

For a permit to be issued, it must be in compliance with related federal laws. The review process and permit decision are often heavily influenced by such laws as the Coastal Zone Management Act, the National Historic Preservation Act, and the Endangered Species Act. A permit decision must also be in compliance with interagency agreements and federal criteria. The most important of these is the 404(b)(1) guidelines. These guidelines mandate a rigorous consideration of alternatives and require that no discharges shall be permitted, if there is a less damaging alternative. The guidelines form an essential environmental protection component of the Corps' 404 regulatory program and are the substantive criteria used in evaluating impacts of discharges on aquatic resources. They are designed to prohibit unnecessary discharges into waters and wetlands.

## The Corps and Wetlands

Since initial passage of the Clean Water Act in 1972, the regulatory program's involvement with wetlands has often been controversial. The Corps defines wetlands through the examination of soil, hydrology, and vegetation characteristics. Wetlands are recognized as being special aquatic sites, and their loss or reduction is generally contrary to the public interest. In cases where development, particularly discharges

of dredged or fill material, would impact wetland resources, conflicts between resource use and preservation often exist. According to the 404(b)(1) guidelines, practicable alternatives are presumed to be available for non-water dependent discharges. A stiff burden of proof lies with the applicant. The USEPA and the Corps are jointly preparing new guidance on dredged material testing and evaluation specifically for the Great Lakes. This guidance will include procedures for bioassay and bioaccumulation tests for dredged materials.

## Application

Applications for the Department of the Army permits can be obtained by contacting the appropriate office listed below. Figure 3 is a sample of the Joint Application Form used for simplifying the approval process for those seeking project authorization from both the Corps and appropriate state agencies. Evaluation of an application begins when all required information is received. Each district can provide specific guidance, as well as materials to assist in preparing an application. In many instances, pre-application meetings are encouraged to

JOINT APPLICATION FORM				
1. Application Number (to be assigned by Agency)		2. Date 14 4 90 Day Month Year		3. For Agency use only (Date Received)
4. Name and address of applicant Village of Laketown Waterworks Building Laketown, IL 61234  Telephone no. during business hours A/C (217) 555-1234 A/C (217) 555-2345		5. Name, address, and title of authorized agent W. J. James James Associates, Inc. 107 - 5th Street, Laketown, IL 61234  Telephone no. during business hours A/C (217) 555-2123 A/C ( )		
6. Project Description and Remarks: Describe in detail the proposed activity, its purpose, and intended use. Use attachments if needed. Improve public use of Village Park by constructing a public boat ramp, two stairways, and protect the shoreline with riprap. A two lane boat ramp (44' x 51½') will be constructed by placing precast monoslab grids over a bedding layer. Two poured in-place concrete lanes will connect the lower ramp to the street. Riprap will extend along the bank for about 700'. The bank will be graded back to a stable 3:1 slope. 18" of riprap will be placed over 6" of filter material. Project includes placement of 1,000 cy of stone riprap, 400 cy of granular bedding materials, and 200 cy of concrete. The area has been a public park for 45 years and is generally mowed grassy areas with large hardwood trees throughout.				
7. Names, address, and telephone numbers of all adjoining and potentially affected property owners, including the owner of subject property if different from applicant. XYZ Corporation 10 Copper Street Laketown, IL 61234 (217) 555-7481 Mr. John Doe 12 Green Street Laketown, IL 61234 (217) 555-4321				
8. Location of activity Legal Description: Name of waterway at location of the activity 1/4 35 Sec. 16N 10E 3rd P.M. Address: Laketown Park Street, road, or other descriptive location Laketown In or near city or town Sangamon IL 61234 County State Zip Code				
9. Date activity is proposed to commence 15 days after issuance Estimated Time of Construction 2 months				
10. Is any portion of the activity for which authorization is sought now complete? Yes X No If answer is "Yes" give reasons in item 6. Month and Year the activity was completed Indicate the existing work on drawings.				
11. List all approvals or certifications required by other federal, interstate, state, or local agencies for any structures, construction, discharges, deposits, or other activities described in this application. If this form is being used for concurrent application to the Corps of Engineers, Illinois Department of Transportation, and Illinois Environmental Protection Agency, these agencies need not be listed. Issuing Agency Type Approval Identification No. Date of Application Date of Approval Laketown Building/Zoning Building (Unknown) 4/1/90 Pending Dept. Permit				
12. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein Yes X No (If "Yes", explain in item 6.)				
13. Application is hereby made for authorizations of the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. Signature of Applicant or Authorized Agent William Smith, Village President Typed or Printed Name of Applicant or Authorized Agent				

NCR FORM 426  
12 SEP 90

Figure 3. Sample of Regulatory Permit.

discuss the proposed work and to avoid undue controversy, unrealistic expectations, and unnecessary delay.

The Corps' regulatory program often involves controversial issues which frequently become high profile. The Corps views its role of balancing competing interests as vital to protecting the Nation's waters. The Corps has a strong commitment to continue to ensure that our Nation's water resources are safeguarded, that those resources are used in the best interest of the public, and that environmental, social, and economic concerns of the public -- for both protection and use of those resources -- are balanced.

If you are planning an activity involving shoreline construction or work in wetlands or other waterways, please contact the responsible Regulatory Branch at the appropriate district (see Figure 2), as far in advance as possible. For additional information or assistance contact one of the following:

Buffalo District  
U.S. Army Corps of Engineers  
ATTN: Regulatory Functions Branch  
1776 Niagara Street  
Buffalo, NY 14207-3199  
(716) 879-4330

Detroit District  
U.S. Army Corps of Engineers  
ATTN: Regulatory Functions Branch  
Box 1027  
Detroit, MI 48231-1027  
(313) 226-2218

St. Paul District  
U.S. Army Corps of Engineers  
ATTN: Regulatory Functions Branch  
180 Kellogg Blvd. East, Rm. 1421  
St. Paul, MN 55101-1479  
(612) 220-0375

Chicago District  
U.S. Army Corps of Engineers  
ATTN: Regulatory Functions Branch  
111 North Canal Street  
Chicago, IL 60606-7206  
(312) 353-6428

Rock Island District  
U.S. Army Corps of Engineers  
ATTN: Regulatory Functions Branch  
P.O. Box 2004  
Rock Island, IL 61204-2004  
(309) 788-6361

Michigan Department of Natural Resources  
ATTN: Land & Water Management Division  
P.O. Box 30028  
Lansing, MI 48909  
(517) 373-9244

#### Levels Reference Study Board Activities

A series of Progress Review Meetings (PRM) (see table below) will provide citizens with an opportunity to review specific aspects of study progress and to provide their comments prior to finalization of the study products. The format of these meetings remains to be finalized, although some consensus has been reached with various study board representatives that they should take the form of evening sessions on the first day of 2-day study workshops. The goal of these Progress Review Meetings is to provide citizens with the opportunity to offer opinions that would be constructive to the study process.

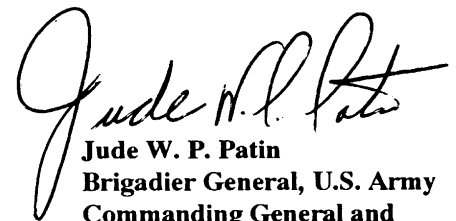
The government policy forums and two sets of four public forums are scheduled near the completion of the study (see table below). The first set of public forums will deal with the draft findings and conclusions of the Phase II study, and the second set will consist of a review of the final

recommendations. Both sets of forums will be conducted independently of any further review that the International Joint Commission may deem necessary for its purposes.

The specific purpose of the public forums is to allow the general public the opportunity to examine and comment upon first, the study's findings and conclusions, and second, the draft recommendations.

A set of policy forums is also scheduled for the fall of 1992 to provide an opportunity for the study board to discuss the study's findings with senior policy makers in state/provincial and federal governments.

Further information on the above meetings will be provided in the future Update Letters.

  
**Jude W. P. Patin**  
Brigadier General, U.S. Army  
Commanding General and  
Division Engineer

#### LEVELS REFERENCE STUDY BOARD ACTIVITIES

TOPIC	LOCATION	DATES
Potential Damages and Erosion Processes	Burlington, ONT	Apr 6-7, 1992
Natural Resources Impacts	Baraga, MI	May 4-5, 1992
Regulation Scenarios, Crisis Conditions, Land Use and Management	Toledo, OH	May 12-13, 1992
Evaluation Criteria	Ann Arbor, MI	Jun 2-3, 1992
Findings and Conclusions Forums	Thunder Bay, ONT Sarnia, ONT Oswego, NY	Nov 16, 1992 Nov 18, 1992 Nov 19, 1992
Draft Recommendations Forums	Buffalo, NY Dorval, QUE Sault St. Marie, ONT Chicago, IL	Feb 8, 1993 Feb 9, 1993 Feb 10, 1993 Feb 11, 1993
Policy Forums	Ottawa, ONT Washington, DC	Oct 20, 1992 Nov 13, 1992